

EDITORIAL

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Cardiovascular Risks of Environmental Tobacco Smoke

The adverse effects of Environmental Tobacco Smoke (ETS) or passive smoking are being increasingly recognized by the scientific community. The detection of a considerable number of carcinogens at significant concentrations in tobacco smoke led to studies on risk assessment of ETS. There are numerous studies on the carcinogenic impact of ETS, among them several published in *Environment International*. The reason for starting with carcinogenic risk was the availability of the needed methodology for carcinogenic risk assessment. These methods, initially developed for ionizing radiation, were applied to chemical carcinogens and physical agents, and later on to mixtures. Despite their shortcomings, methods for cancer assessment have found acceptance by international organizations and by national regulatory agencies and are routinely applied in the regulatory process.

In contrast to cancer assessment, the assessment of risk associated with the exposure to agents causing cardiovascular diseases is in its infancy. There are no convincing dose-response models for these diseases and available animal models do not readily lend themselves to a quantification of cardiovascular risks. Available data indicates that two to three times as many people die from heart diseases as compared to those who die from cancer. If one takes into account the age of the affected individuals, this ratio is increased to about five to seven. In other words, the population in the industrialized nations loses five to seven times the number

of years of life to heart disease as compared to cancer.

This issue of the Journal contains a paper on the potential risks associated with exposure to ETS. The paper by Wells is an attempt to quantify this risk based on available statistical data. Because this paper is probably the first of its kind, the editors were particularly concerned over the validity of the original data, their application to risk assessment, and the statistical treatment of the subject.

The editors received recommendations from three reviewers. Two reviewers recommended publication subject to revisions recommended by them. A third reviewer recommended rejection of the paper on the basis that the paper was too speculative. This latter reviewer did not provide any specific recommendation on how to improve the quality of the paper. Despite the "mixed" review, we chose to publish the paper.

Given the current status of cardiovascular risk assessment, there is no doubt that the estimates provided by Wells will be less than accurate. However, there is no reason to doubt that ETS may be associated with a considerable cardiovascular risk.

The role of the scientific community is to provide the societal decision makers with the best available scientific information. The availability of the paper on the health risks of ETS will provide these decision makers and the general public with the needed information. It is not unreasonable to expect that this new information will become the basis for additional restrictions of smoking in public places.

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